



## Blood Work and Your Pet

Pets can't say how they're feeling—it's usually how they look or act that tells you something is wrong. You play a key role in helping your pet combat illness and stay as healthy as possible. Awareness of the warning signs and regular preventive health screens, including a physical exam and blood work, are the best ways to ensure your pet lives a long, healthy, and happy life.

### When Is Blood Work Necessary?

- **Sick and emergency situations.** Blood work provides you with a valuable picture of your pet's health and is often the first step when pets are brought in to a clinic because they are sick or in an emergency situation. It helps the veterinary staff make immediate decisions, so they can quickly help your pet.
- **Preanesthetic testing.** Blood work is routinely done prior to your pet's surgery, dentistry, or other procedures that require anesthesia. It lets the veterinary staff know if anesthesia is safe for your pet and allows them to make adjustments if they see anything abnormal. This blood work is often performed the same day as anesthesia is scheduled, making it easy for you and your pet because it eliminates the need to have your pet fast more than once and reduces the number of trips you need to make to the hospital.
- **Preventive care screening.** Because the signs that your pet is sick are not always obvious, preventive care testing is often recommended as part of your pet's annual exam. Preventive care screening not only uncovers disease before it's too late, but can also help you avoid significant medical expenses and risks to your pet's health.
- **Medication monitoring.** Some medications can have side effects. Periodic blood work while your pet is being treated can find these problems early and allow your veterinarian to make necessary changes. With other medications, blood tests are needed to ensure that the dosage is appropriate.

### What Tests Might My Veterinarian Run?

There are tests that are routinely performed when blood work is recommended. They include:

- A complete blood count (CBC) tells you if your pet has an infection, if inflammation is present, or if your pet is anemic.
- A complete blood chemistry panel including electrolytes provides information about your pet's liver, kidneys, and pancreas, as well as other functions of the body, such as blood sugar and hydration.
- A urinalysis identifies an infection or inflammation in the urinary tract.
- A thyroid function test detects whether or not your pet's thyroid gland is functioning properly. Thyroid disease is very common in older cats and dogs.

Your veterinarian may recommend additional tests.

### When Can I Expect Results?

Many of the tests routinely recommended can be performed in-clinic, providing results quickly and allowing for immediate treatment of your pet. In-clinic blood testing also lets you be more involved in your pet's care, since you can discuss test results with your veterinarian while you're still at the clinic. Normal results can rule out certain diseases immediately, so you can worry less. If results are abnormal, your veterinarian can make fast decisions about next steps, including treatment and additional tests. This saves you time as well as trips back and forth to your veterinarian, and gives you answers that will help your pet right away.

# Understanding Your Pet's Test Results

Blood testing can frequently detect illness in your pet before we see any outward signs of disease. Testing gives us immediate insights that we might not otherwise discover. And, treating your pet early can lead to a better outcome and possibly lower treatment costs.

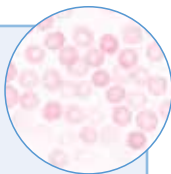
## Complete Blood Count (CBC)

**Red Blood Cells:** Red blood cells (RBCs) are the most numerous and longest-living of the different types of blood cells; they typically make up almost half of the blood's volume. RBCs contain a special protein called hemoglobin (HGB) that binds to the oxygen in the lungs and enables the RBCs to transport oxygen as it travels through the rest of the body.

### Blood

CBC is used to screen for:

- Anemia (low red blood cells)
- Inflammation
- Infection
- Stress
- Leukemia
- Bleeding problem
- Inability to fight infection
- Hydration status



**Reticulocytes:** These are immature RBCs increased during times of increased red cell production, such as blood loss or immune-mediated anemia.

**White blood cells:** White blood cells are primarily responsible for fighting infections. There are five different types of white blood cells and each one performs specific functions to keep the body healthy.

**Platelets:** Platelets play a critical role in preventing bleeding.

## Chemistry

**Kidneys:** Kidneys are responsible for filtering metabolic waste products, excess sodium, and water from the blood stream, which are then transferred to the bladder for excretion.

### Kidneys

Blood and urine tests can indicate:

- Early renal disease
- Renal failure
- Infection
- Stones
- Cancer
- Abnormalities resulting from long-term medications



**Liver:** The liver is a large organ with many different functions. It processes the blood by removing both bacteria and toxins as well as further breaking down many of the complex nutrients absorbed during the digestion of food into much smaller components for use by the rest of the body.

### Liver

Biochemistry tests can indicate:

- Liver disease
- Cushing's syndrome
- Certain cancers
- Dehydration
- Obstruction of the bile ducts
- Abnormalities resulting from long-term medications



**Pancreas:** The pancreas is a small organ located near the small intestines and is responsible for producing several digestive enzymes and hormones that help regulate metabolism.

### Pancreas

Biochemistry tests can indicate:

- Pancreatitis (inflammation of the pancreas)
- Diabetes mellitus
- Abnormalities resulting from long-term medications
- Cancer



**Glucose:** Glucose is the basic nutrient for the body. It is highly regulated in the blood stream, but does fluctuate for a few hours after eating. Glucose changes may be seen with a variety of metabolic diseases, such as diabetes, and various organ system abnormalities.

**Electrolytes:** Electrolytes (Na, K, Cl, tCO<sub>2</sub>, Anion Gap) are critical to body function and must be maintained in very narrow limits. Dehydration is a common cause of electrolyte imbalance, despite how effective the body is at regulating the concentration levels.

## Urine

**Urinalysis:** Although not a blood test, a urinalysis is essential for a comprehensive evaluation of kidney function. A urinalysis includes physical, chemical, and microscopic evaluation of urine. This evaluation provides additional information about the kidney and liver, as well as the general well-being of your pet.

## Thyroid

**Thyroid:** Thyroxine (T<sub>4</sub>), a hormone produced by the thyroid gland, is essential for growth and metabolism. As your pet ages, thyroid function can become abnormal and cause signs of illness.

### Thyroid

Endocrine tests can indicate:

- Hypothyroidism
- Hyperthyroidism

